```
=> file caplus
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                          ENTRY    SESSION
FULL ESTIMATED COST                                        0.15       0.15

FILE 'CAPLUS' ENTERED AT 13:42:32 ON 12 FEB 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)
```



```
FILE COVERS 1907 - 12 Feb 2002  VOL 136 ISS 7
FILE LAST UPDATED: 11 Feb 2002  (20020211/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

The P indicator for Preparations was not generated for all of the
CAS Registry Numbers that were added to the CAS files between 12/27/01
and 1/23/02.  As of 1/23/02, the situation has been resolved.  Searches
and/or SDIs in the H/Z/CA/CAplus files incorporating CAS Registry
Numbers with the P indicator executed between 12/27/01 and 1/23/02 may
be incomplete.  See the NEWS message on this topic for more information.

=> s adipocyte
          8852 ADIPOCYTE
          8255 ADIPOCYTES
L1       11103 ADIPOCYTE
                 (ADIPOCYTE OR ADIPOCYTES)

=> s fat cell
        147571 FAT
         75247 FATS
        183783 FAT
                 (FAT OR FATS)
       1495791 CELL
       1345095 CELLS
       2030564 CELL
                 (CELL OR CELLS)
L2        3850 FAT CELL
                 (FAT(W)CELL)

=> s l1 or l2
L3       13281 L1 OR L2
```

```
=> s culture or cultured
         308181 CULTURE
         176332 CULTURES
         413016 CULTURE
                (CULTURE OR CULTURES)
         161001 CULTURED
L4       505156 CULTURE OR CULTURED

=> s l3 and l4
L5         1688 L3 AND L4

=> s protein or peptide
        1377294 PROTEIN
         892241 PROTEINS
        1585646 PROTEIN
                (PROTEIN OR PROTEINS)
         268030 PEPTIDE
         191197 PEPTIDES
         340098 PEPTIDE
                (PEPTIDE OR PEPTIDES)
L6      1771287 PROTEIN OR PEPTIDE

=> s separat? or identi?
         263740 SEPARAT?
         228615 SEP
          12316 SEPS
         239831 SEP
                (SEP OR SEPS)
         399884 SEPD
              3 SEPDS
         399887 SEPD
                (SEPD OR SEPDS)
          73672 SEPG
              1 SEPGS
          73673 SEPG
                (SEPG OR SEPGS)
         447210 SEPN
          30290 SEPNS
         463072 SEPN
                (SEPN OR SEPNS)
        1143075 SEPARAT?
                (SEPARAT? OR SEP OR SEPD OR SEPG OR SEPN)
         994783 IDENTI?
L7      2045360 SEPARAT? OR IDENTI?

=> s l5 and l6 and l7
L8          154 L5 AND L6 AND L7

=> s preadipocyte
           1255 PREADIPOCYTE
           1031 PREADIPOCYTES
L9         1525 PREADIPOCYTE
                (PREADIPOCYTE OR PREADIPOCYTES)

=> s l9 and l8
L10          33 L9 AND L8

=> d ti 1-33

L10  ANSWER 1 OF 33  CAPLUS  COPYRIGHT 2002 ACS
```

TI Induction of leptin expression in orbital **preadipocyte** fibroblasts

L10 ANSWER 2 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Insulin-responsive compartments containing GLUT4 in 3T3-L1 and CHO cells: regulation by amino acid concentrations

L10 ANSWER 3 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Altered expression of C/EBP family members results in decreased adipogenesis with aging

L10 ANSWER 4 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Fat depot origin affects fatty acid handling in **cultured** rat and human **preadipocytes**

L10 ANSWER 5 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Insulin/IGF-1 and TNF-.alpha. stimulate phosphorylation of IRS-1 at inhibitory Ser307 via distinct pathways

L10 ANSWER 6 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Autocrine regulation of human **preadipocyte** migration by plasminogen activator inhibitor-1

L10 ANSWER 7 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Growth and differentiation factor inhibitors and uses therefor

L10 ANSWER 8 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Inhibition of chicken **adipocyte** differentiation by in vitro exposure to monoclonal antibodies against embryonic chicken **adipocyte** plasma membranes

L10 ANSWER 9 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Priming with magnesium-deficient media inhibits **preadipocyte** differentiation via potential upregulation of tumor necrosis factor-.alpha.

L10 ANSWER 10 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Synthesis and secretion of plasminogen activator inhibitor-1 by human **preadipocytes**

L10 ANSWER 11 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI PPAR.gamma. ligand-dependent induction of STAT1, STAT5A, and STAT5B during adipogenesis

L10 ANSWER 12 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Molecular cloning of a major mRNA species in murine 3T3 **adipocyte** lineage. Differentiation-dependent expression, regulation, and **identification** as semicarbazide-sensitive amine oxidase

L10 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Angiotensin II receptors in human **preadipocytes**: role in cell cycle regulation

L10 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Understanding **adipocyte** differentiation

L10 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Regulation of triglyceride metabolism by PPARs: fibrates and thiazolidinediones have distinct effects

L10 ANSWER 16 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Differential expression of exons 1a and 1c in mRNAs for sterol regulatory element binding **protein**-1 in human and mouse organs and **cultured** cells

L10 ANSWER 17 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Regulation of the murine **adipocyte** fatty acid transporter gene by insulin

L10 ANSWER 18 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Differentiation-dependent expression of the brown **adipocyte** uncoupling **protein** gene: regulation by peroxisome proliferator-activated receptor .gamma.

L10 ANSWER 19 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Signal transduction pathway of acylation stimulating **protein**: involvement of **protein** kinase C

L10 ANSWER 20 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Cellular and molecular aspects of the regulation of adipogenesis

L10 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Cloning of a rat **adipocyte** membrane **protein** implicated in binding or transport of long-chain fatty acids that is induced during **preadipocyte** differentiation. Homology with human CD36

L10 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Differentiation of **adipocyte** precursors in a serum-free medium is influenced by glucocorticoids and endogenously produced insulin-like growth factor-I

L10 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Transiently and stably introduced CCAAT/enhancer-binding-**protein** genes are constitutively expressed in **cultured** cells

L10 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI **Identification** of a **fat cell** enhancer: analysis of requirements for adipose tissue-specific gene expression

L10 ANSWER 25 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Analysis of a tissue-specific enhancer: ARF6 regulates adipogenic gene expression

L10 ANSWER 26 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Late expression of .alpha.2-adrenergic-mediated antilipolysis during differentiation of hamster **preadipocytes**

L10 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI A study of **adipocyte** precursor cells derived from brown adipose tissue: the expression of specific cell surface antigens during their differentiation in **culture**

L10 ANSWER 28 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Microtubule-associated **protein** 1A is the fibroblast HMW MAP undergoing mitogen-stimulated serine phosphorylation

L10 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Effects of cholera toxin on gene expression in brown **preadipocytes** differentiating in **culture**

L10 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Isolation and sequencing of a cDNA encoding the decarboxylase (E1).alpha. precursor of bovine branched-chain .alpha.-keto acid dehydrogenase complex. Expression of E1.alpha. mRNA and subunit in maple-syrup-urine-disease and 3T3-L1 cells

L10 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Insulin stimulates glyceraldehyde-3-phosphate dehydrogenase gene expression through cis-acting DNA sequences

L10 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Cloning and expression of mouse fatty acid synthase and other specific mRNAs. Developmental and hormonal regulation in 3T3-L1 cells

L10 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2002 ACS
TI Hormone-sensitive lipase system and insulin stimulation of **protein** phosphatase activities in 3T3-L1 **adipocytes**

=> d bib ab 13 14 15 21 22 23 24 27

L10 ANSWER 13 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1999:11147 CAPLUS
DN 130:149090
TI Angiotensin II receptors in human **preadipocytes**: role in cell cycle regulation
AU Crandall, David L.; Armellino, Douglas C.; Busler, Dennis E.; McHendry-Rinde, Barbara; Kral, John G.
CS Wyeth-Ayerst Research, Princeton, NJ, 08543, USA
SO Endocrinology (1999), 140(1), 154-158
CODEN: ENDOAO; ISSN: 0013-7227
PB Endocrine Society
DT Journal
LA English
AB The role of angiotensin II (AII) in human **preadipocyte** physiol. has been investigated in primary **cultures** from human adipose tissue. Receptor binding studies indicated that human **preadipocytes** express a high affinity AII binding site of the AT1 subtype, as binding of 125I-labeled [Sar1,Ile8]AII was rapid, saturable, and specific. As AII has previously been demonstrated to affect the cell cycle in adrenal and cardiac cells, the effect of AII on regulation of cycle progression was examd. in human **preadipocytes**. Stimulation of **preadipocytes** with AII resulted in G1 phase progression of the cell cycle, as detd. by flow cytometric anal. AII treatment was assocd. with induction of expression of the mRNA for the cell cycle regulatory **protein** cyclin D1 in a dose-dependent manner. Pretreatment of cells with subtype-selective AT receptor ligands before AII stimulation indicated that the cyclin response was mediated via the AT1 receptor. The **identity** of the cells as **preadipocyte** was verified by **culture** in a defined differentiation medium, observing both leptin message expression and triglyceride accumulation by flow cytometry. These findings indicate that AII has early, receptor-mediated effects on cell cycle progression in human **preadipocytes** that may contribute to differentiation to the **adipocyte** phenotype.
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 14 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1998:515549 CAPLUS
DN 129:258060
TI Understanding **adipocyte** differentiation
AU Gregoire, Francine M.; Smas, Cynthia M.; Sul, Hei Sook
CS Department of Nutritional Sciences, University of California, Berkeley, CA, USA
SO Physiol. Rev. (1998), 78(3), 783-809
CODEN: PHREA7; ISSN: 0031-9333
PB American Physiological Society
DT Journal; General Review
LA English
AB A review with 311 refs. The **adipocyte** plays a crit. role in energy balance. Adipose tissue growth involves an increase in **adipocyte** size and the formation of new **adipocytes** from precursor cells. For the last 20 yr, the cellular and mol. mechanisms of **adipocyte** differentiation have been extensively studied using **preadipocyte culture** systems. Committed **preadipocytes** undergo growth arrest and subsequent terminal differentiation into **adipocytes**. This is accompanied by a dramatic increase in expression of **adipocyte** genes including **adipocyte** fatty acid binding **protein** and lipid-metabolizing enzymes. Characterization of regulatory regions of adipose-specific genes has led to the **identification** of the transcription factors, peroxisome proliferator-activated receptor-.gamma. (PPAR-.gamma.) and CCAAT/enhancer binding **protein** (C/EBP), which play a key role in the complex transcriptional cascade during **adipocyte** differentiation. Growth and differentiation of **preadipocytes** is controlled by communication between individual cells or between cells and the extracellular environment. Various hormones and growth factors that affect **adipocyte** differentiation in a pos. or neg. manner have been **identified**. In addn., components involved in cell-cell or cell-matrix interactions such as **preadipocyte** factor-1 and extracellular matrix **proteins** are also pivotal in regulating the differentiation process. **Identification** of these mols. has yielded clues to the biochem. pathways that ultimately result in transcriptional activation via PPAR-.gamma. and C/EBP. Studies on the regulation of the these transcription factors and the mode of action of various agents that influence **adipocyte** differentiation will reveal the physiol. and pathophysiol. mechanisms underlying adipose tissue development.

L10 ANSWER 15 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1997:431412 CAPLUS
DN 127:104189
TI Regulation of triglyceride metabolism by PPARs: fibrates and thiazolidinediones have distinct effects
AU Auwerx, Johan; Schoonjans, Kristina; Fruchart, Jean-Charles; Staels, Bart
CS Departement d'Atherosclerose, U. 325 INSERM, Institut Pasteur, Lille, 59019, Fr.
SO J. Atheroscler. Thromb. (1996), 3(2), 81-89
CODEN: JATHEH; ISSN: 1340-3478
PB Japan Atherosclerosis Society
DT Journal
LA English
AB The mol. mechanism by which hypolipidemic fibrates and antidiabetic thiazolidinediones exert their hypotriglyceridemic action are discussed. Increased activity of lipoprotein lipase (LPL), a key lipolytic enzyme,

and decreased levels of apolipoprotein C-III (apo C-III) seem to explain the hypotriglyceridemic effects of compds. Both fibrates and thiazolidinediones exert their action by activating transcription factors of the peroxisome proliferator-activated receptor (PPAR) family, thereby modulating the expression of the LPL and apo C-II genes. First, treatment of rats with PPAR.alpha. activators, such as fibrates induced LPL mRNA and activity selectively in the liver. In contrast, the thiazolidinediones, which are high affinity ligands for PPAR.gamma., have no effect on liver, but induce LPL mRNA and activity levels in adipose tissue. In hepatocytes, fibrates, unlike the thiazolidinediones, induce LPL mRNA levels, whereas in **preadipocyte** cell lines the PPAR.gamma. ligand induces LPL mRNA levels much quicker and to a higher extent than fibrates. Second, apo C-III mRNA and **protein** prodn. strongly decrease in livers of fibrate- but not thiazolidinedione-treated animals. Fibrates also reduced apo C-III prodn. in primary **cultures** of rat and human hepatocytes. The modulation of the expression of the LPL and apo C-III genes by either PPAR.alpha. or .gamma. activators, correlates with the tissue-specific distribution of the resp. PPARs: PPAR.gamma. expression is restricted to adipose tissues, whereas PPAR.alpha. is expressed predominantly in liver. In both the LPL and apo C-III genes, sequence elements responsible for the modulation of their expression by activated PPARs have been **identified** which supports that the transcriptional regulation of these genes by fibrates and thiazolidinediones contributes significantly to their hypotriglyceridemic effects in vivo. Whereas thiazolidinediones pre-dominantly affect **adipocyte** LPL prodn. through activation of PPAR.gamma., fibrates exert their effects mainly in the liver via a PPAR.alpha.-mediated redn. in apo C-III prodn. This tissue-specific transcriptional regulation of genes involved in lipid metab. by PPAR activators and/or ligands might have important therapeutic implications.

L10 ANSWER 21 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1993:514293 CAPLUS
DN 119:114293
TI Cloning of a rat **adipocyte** membrane **protein** implicated in binding or transport of long-chain fatty acids that is induced during **preadipocyte** differentiation. Homology with human CD36
AU Abumrad, Nada A.; El-Maghrabi, M. Raafat; Lopez, Ellen; Amri, Ez Zoubir; Grimaldi, Paul A.
CS Dep. Physiol. Biophys., State Univ. New York, Stony Brook, NY, 11794, USA
SO J. Biol. Chem. (1993), 268(24), 17665-8
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB A cDNA for an **adipocyte** membrane **protein**, implicated in the transport of long-chain fatty acids, was isolated by screening with a synthetic oligonucleotide derived from the N-terminal sequence of the **protein**. The 88-kDa **adipocyte** membrane **protein** was previously **identified** by covalent labeling with N-sulfosuccinimidyl esters of long-chain fatty acids which irreversibly inhibited fatty acid transport by 75%. The cDNA (FAT, 2432 base pairs (bp)) contained 70 bp of 5'-untranslated sequence, an open reading frame encoding a 472-amino acid **protein** with a predicted mol. mass of 52,466, and 940 bp of 3'-untranslated sequence with 2 polyadenylation signal sequences but with no polyadenylation tail. The deduced **protein** sequence predicted 2 transmembrane segments and 10 potential N-linked glycosylation sites. Extensive glycosylation most

likely explains why the mol. mass of the isolated **protein** (88 kDa) is different from that deduced from the cDNA sequence (53 kDa). The sequence of FAT is 85% homologous with that of glycoprotein IV (CD36) **identified** in human platelets and in lactating mammary epithelium. Consistent with this, a polyclonal antibody against CD36 reacted with **adipocyte** plasma membranes and detected a single band at 88 kDa. Northern blot anal. of RNA obtained from rat adipose tissue and probed with the cDNA **identified** 2 major transcripts of 4.8 and 2.9 kilobases which were abundant in heart, intestine, fat, muscle, and testis. The mRNAs were not detectable in **cultured** adipose cell lines (Ob1771, 3T3F442A) at the fibroblastic stage but was strongly induced during the differentiation process and by treatment of **preadipocytes** with dexamethasone, conditions that were also assocd. with an increase in oleate transport. In contrast, the fibroblastic cell lines 3T3-C2 and L929, which do not differentiate, did not express the mRNAs at all stages of **culture**. The data suggest that FAT and CD36 belong to a family of **proteins** that bind/transport long-chain fatty acids or function as regulators of these processes.

L10 ANSWER 22 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1993:421117 CAPLUS
DN 119:21117
TI Differentiation of **adipocyte** precursors in a serum-free medium is influenced by glucocorticoids and endogenously produced insulin-like growth factor-I
AU Nougues, Jean; Reyne, Yves; Barenton, Bruno; Chery, Therese; Garandel, Veronique; Soriano, Josette
CS Unite Differ. Cell. Croissance, Inst. Natl. Rech. Agron., Montpellier, 34060, Fr.
SO Int. J. Obes. (1993), 17(3), 159-67
CODEN: IJOBDP; ISSN: 0307-0565
DT Journal
LA English
AB Stromal vascular cells from rabbit perirenal adipose tissue differentiated at a high frequency in a chem.-defined serum-free medium contg. insulin, transferrin, T3, and dexamethasone. The omission from the **culture** medium of dexamethasone resulted in a lack of adipose conversion. Addn. of IGF-I increased glycerol-3-phosphate dehydrogenase (GPDH) activity. The conditioned media from **adipocyte** precursor cells contained measurable quantities of immunoreactive IGF-I as detd. by RIA after neutralization of IGF binding **proteins** interference. Dexamethasone increased IGF-I secretion during the first 7 days after plating and decreased IGF-I binding to conditioned media. Three mol. forms of IGF binding **proteins** (IGFBPs) were **identified** by Western ligand blots in conditioned media, with Mr = 40,000, 29,000 and 25,000. The major form (Mr = 29,000) was decreased by dexamethasone. In contrast, the Mr = 24,000 form was increased. Specific binding of 125I-labeled IGF-I to rabbit **adipocyte** precursor cells was more effectively inhibited by unlabeled IGF-I than by unlabeled IGF-II or insulin. The electrophoretic migration of crosslinked 125I-IGF-I to microsomal membranes revealed a complex with Mr = 130,000 under reducing conditions corresponding to the .alpha.-subunit of the IGF-I receptor. The addn. of IGF-I monoclonal antibody to rabbit **adipocyte** precursor cells **cultured** in serum-free medium inhibited [3H]thymidine incorporation and decreased (50%) GPDH specific activities. This inhibitory effect was overcome by the addn. of exogenous IGF-I. Thus, stromal vascular cells isolated from perirenal adipose tissue

secrete IGF-I and IGFBPs, possess IGF-I receptors and respond to exogenous and endogenous IGF-I. In addn., the results indicate that the IGF-I autocrine/paracrine role in replication and differentation of rabbit **adipocyte** precursors is influenced by glucocorticoids.

L10 ANSWER 23 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1992:585987 CAPLUS
DN 117:185987
TI Transiently and stably introduced CCAAT/enhancer-binding-**protein** genes are constitutively expressed in **cultured** cells
AU Xanthopoulos, Kleanthis G.; Cannon, Paul D.; Robinson, Gregory S.; Mirkovitch, Jovan; Darnell, James E., Jr.
CS Cent. Biotechnol., Karolinska Inst., Huddinge, S-141 57, Swed.
SO Eur. J. Biochem. (1992), 208(2), 501-9
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB CCAAT/enhancer-binding **protein** (C/EBP) is expressed in certain cell types including hepatocytes and **adipocytes**. To understand the mechanisms that control the expression of the mouse C/EBP gene in the liver as well as in **adipocytes**, the authors studied both the endogenous gene and transfected C/EBP gene constructs. The initiation site of transcription was **identified** and a strong liver-specific DNase-I hypersensitive site located at -3 kb, which does not contribute functionally to the regulation of the gene in a variety of either transiently or stably transfected cells with constructs which include sequences .ltoreq.6-kb upstream of the transcription start. C/EBP gene expression during the transition from **preadipocytes** to **adipocytes** was controlled at the level of transcription. However, **adipocytes** stably transfected with constructs that include -3.3 kb upstream of the C/EBP gene do not express the reporter genes in a differentiation-specific manner. Several DNA-binding **proteins** were detected that interact with the upstream sites of the C/EBP gene. Those include 2 labile and 2 heat-stable site-specific DNA-binding **proteins** that are present in nuclear exts. from several tissues and **cultured** cell lines.

L10 ANSWER 24 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1992:525443 CAPLUS
DN 117:125443
TI **Identification** of a **fat cell** enhancer: analysis of requirements for adipose tissue-specific gene expression
AU Graves, Reed A.; Tontonoz, Peter; Platt, Kenneth A.; Ross, Susan R.; Spiegelman, Bruce M.
CS Dana-Farber Cancer Inst., Boston, MA, 02115, USA
SO J. Cell. Biochem. (1992), 49(3), 219-24
CODEN: JCEBD5; ISSN: 0730-2312
DT Journal; General Review
LA English
AB A review with 20 refs. of the authors recent results on the **identification** and characterization of a far upstream enhancer from the murine aP2 gene that directs high levels of adipose-specific gene expression in transgenic mice. Although the proximal promoter contg. AP-1 and C/EBP binding sites is capable of directing differentiation-dependent gene expression in **cultured adipocytes**, these constructs are essentially inactive in the tissues of transgenic mice. -5.4 Kb of the 5'-flanking region were required to direct heterologous

gene (chloramphenicol acetyl transferase; CAT) expression to the adipose tissue of transgenic mice. Deletion anal. was used to **identify** a 520 bp enhancer at -5.4 kb of the ap2 gene that can direct high levels of gene expression specifically to the adipose tissue of transgenic mice. This enhancer also functions in a differentiation-dependent manner in **cultured adipocytes** and cannot be transactivated in **preadipocytes** by C/EBP. Mol. anal. indicates that several cis- and trans- acting acting elements, though not C/EBP, contribute to the specificity and potency of this enhancer. The potential uses of this enhancer to target the expression of **proteins** to the adipose depot in transgenic animals in discussed.

L10 ANSWER 27 OF 33 CAPLUS COPYRIGHT 2002 ACS
AN 1991:79277 CAPLUS
DN 114:79277
TI A study of **adipocyte** precursor cells derived from brown adipose tissue: the expression of specific cell surface antigens during their differentiation in **culture**
AU Lee, S. R.; Cryer, A.
CS Coll. Cardiff, Univ. Wales, Cardiff, CF1 1ST, UK
SO J. Dev. Physiol. (1990), 13(2), 105-13
CODEN: JDPHDH; ISSN: 0141-9846
DT Journal
LA English
AB Using cell specific anti-**adipocyte** sera and an immuno-pptn. procedure, the nature of the cell surface antigens characterizing **adipocytes** from rat brown adipose tissue was investigated. Initially the ability of anti-sera, raised against adipose plasma membrane prepns. of white or brown adipose tissue, to distinguish between membrane prepns. derived from either tissue was confirmed. Anal. of the plasma membranes derived from brown adipose and similar prepns. labeled with 125I revealed the presence of specific externally disposed mature brown **adipocyte**-specific antigens. The specifically immunopptd. antigens had mol. wts. of 70,000, 56,000 and 23,000. None of these antigens were cross immunopptd. by antisera to mature white **adipocyte** membranes. The presence of the brown adipose-specific antigens on the surface of differentiating **adipocyte** precursor cells derived from rat brown adipose tissue was demonstrated using a labeled-second antibody cellular immunoassay. The expression of the immunoreactivity assocd. with these antigens was shown to be an early event in the differentiation program of the cells in vitro. The functional **identity** and possible roles of these antigens in the control of brown **adipocyte** differentiation now becomes accessible to further exptl. investigation.

=> file biosis

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	47.30	47.45

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.96	-4.96

FILE 'BIOSIS' ENTERED AT 13:48:30 ON 12 FEB 2002

```
FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 6 February 2002 (20020206/ED)

The BIOSIS file has been reloaded.  Enter HELP RLOAD and HELP REINDEXING
for details.

=> s l10

            739 PREADIPOCYTE
           1093 PREADIPOCYTES
           1462 PREADIPOCYTE
                  (PREADIPOCYTE OR PREADIPOCYTES)
           6955 ADIPOCYTE
           9195 ADIPOCYTES
          12860 ADIPOCYTE
                  (ADIPOCYTE OR ADIPOCYTES)
         115080 FAT
          15692 FATS
         125687 FAT
                  (FAT OR FATS)
        2079521 CELL
        1551926 CELLS
        2688187 CELL
                  (CELL OR CELLS)
           4459 FAT CELL
                  (FAT(W)CELL)
         336253 CULTURE
         182412 CULTURES
         453160 CULTURE
                  (CULTURE OR CULTURES)
         182636 CULTURED
              3 CULTUREDS
         182638 CULTURED
                  (CULTURED OR CULTUREDS)
        1180371 PROTEIN
         442697 PROTEINS
        1362663 PROTEIN
                  (PROTEIN OR PROTEINS)
         208624 PEPTIDE
         104949 PEPTIDES
         266194 PEPTIDE
                  (PEPTIDE OR PEPTIDES)
         316515 SEPARAT?
         791696 IDENTI?
L11          26 L9 AND L8

=> s l11 not l26
L26 NOT FOUND
The L-number entered could not be found.  To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l11 not l10
            739 PREADIPOCYTE
           1093 PREADIPOCYTES
           1462 PREADIPOCYTE
                  (PREADIPOCYTE OR PREADIPOCYTES)
           6955 ADIPOCYTE
```

```
          9195 ADIPOCYTES
         12860 ADIPOCYTE
                 (ADIPOCYTE OR ADIPOCYTES)
        115080 FAT
         15692 FATS
        125687 FAT
                 (FAT OR FATS)
       2079521 CELL
       1551926 CELLS
       2688187 CELL
                 (CELL OR CELLS)
          4459 FAT CELL
                 (FAT(W)CELL)
        336253 CULTURE
        182412 CULTURES
        453160 CULTURE
                 (CULTURE OR CULTURES)
        182636 CULTURED
             3 CULTUREDS
        182638 CULTURED
                 (CULTURED OR CULTUREDS)
       1180371 PROTEIN
        442697 PROTEINS
       1362663 PROTEIN
                 (PROTEIN OR PROTEINS)
        208624 PEPTIDE
        104949 PEPTIDES
        266194 PEPTIDE
                 (PEPTIDE OR PEPTIDES)
        316515 SEPARAT?
        791696 IDENTI?
L12          0 L11 NOT L10

=> d ti l11

L11  ANSWER 1 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Adipose depot-specific expression of cIAP2 in human preadipocytes
     and modulation of expression by serum factors and TNFalpha.


=> d ti l11 1-26

L11  ANSWER 1 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Adipose depot-specific expression of cIAP2 in human preadipocytes
     and modulation of expression by serum factors and TNFalpha.

L11  ANSWER 2 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Altered expression of C/EBP family members results in decreased
     adipogenesis with aging.

L11  ANSWER 3 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Fat depot origin affects fatty acid handling in cultured rat and
     human preadipocytes.

L11  ANSWER 4 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Autocrine regulation of human preadipocyte migration by
     plasminogen activator inhibitor-1.

L11  ANSWER 5 OF 26  BIOSIS  COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI   Metallothionein gene expression and secretion in white adipose tissue.
```

L11 ANSWER 6 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adipogenesis in thyroid eye disease.

L11 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI A branched DNA signal amplification assay to quantitate messenger RNA of human uncoupling **proteins** 1, 2, and 3.

L11 ANSWER 8 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Inhibition of chicken **adipocyte** differentiation by in vitro exposure to monoclonal antibodies against embryonic chicken **adipocyte** plasma membranes.

L11 ANSWER 9 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Priming with magnesium-deficient media inhibits **preadipocyte** differentiation via potential upregulation of tumor necrosis factor-alpha.

L11 ANSWER 10 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Synthesis and secretion of plasminogen activator inhibitor-1 by human **preadipocytes**.

L11 ANSWER 11 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI PPARgamma ligand-dependent induction of STAT1, STAT5A, and STAT5B during adipogenesis.

L11 ANSWER 12 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Angiotensin II receptors in human **preadipocytes**: Role in cell cycle regulation.

L11 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Adipose tissue extracellular matrix: Newly organized by **adipocytes** during differentiation.

L11 ANSWER 14 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Differential expression of exons 1a and 1c in mRNAs for sterol regulatory element binding **protein**-1 in human and mouse organs and **cultured** cells.

L11 ANSWER 15 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Regulation of the murine **adipocyte** fatty acid transporter gene by insulin.

L11 ANSWER 16 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Differentiation-dependent expression of the brown **adipocyte** uncoupling **protein** gene: Regulation by peroxisome proliferator-activated receptor gamma.

L11 ANSWER 17 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Signal transduction pathway of acylation stimulating **protein**: Involvement of **protein** kinase C.

L11 ANSWER 18 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI Cloning of a rat **adipocyte** membrane **protein** implicated in binding or transport of long-chain fatty acids that is induced during **preadipocyte** differentiation: Homology with human CD36.

L11 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI TRANSIENTLY AND STABLY INTRODUCED CCAAT-ENHANCER-BINDING-**PROTEIN** GENES ARE CONSTITUTIVELY EXPRESSED IN **CULTURED** CELLS.

L11 ANSWER 20 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI LATE EXPRESSION OF ALPHA-2-ADRENERGIC-MEDIATED ANTILIPOLYSIS DURING DIFFERENTIATION OF HAMSTER **PREADIPOCYTES**.

L11 ANSWER 21 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI CYTOPLASMIC **PROTEINS** OF PORCINE **ADIPOCYTES** **IDENTIFICATION** WITH MONOCLONAL ANTIBODIES.

L11 ANSWER 22 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI EFFECTS OF CHOLERA TOXIN ON GENE EXPRESSION IN BROWN **PREADIPOCYTES** DIFFERENTIATING IN **CULTURE**.

L11 ANSWER 23 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI S-100 **PROTEIN** IN WHITE **PREADIPOCYTES** AN IMMUNOELECTRON MICROSCOPIC STUDY.

L11 ANSWER 24 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI ISOLATION AND SEQUENCING OF A COMPLEMENTARY DNA ENCODING THE DECARBOXYLASE
E-1-ALPHA PRECURSOR OF BOVINE BRANCHED-CHAIN ALPHA KETO ACID DEHYDROGENASE
COMPLEX EXPRESSION OF E-1-ALPHA MESSENGER RNA AND SUBUNIT IN MAPLE-SYRUP URINE DISEASE AND 3T3-L1 CELLS.

L11 ANSWER 25 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI LIPO **PROTEIN** LIPASE EC-3.1.1.34 CONTENT IN OB-17 **PREADIPOCYTES** DURING ADIPOSE CONVERSION IMMUNO FLUORESCENT LOCALIZATION OF THE ENZYME.

L11 ANSWER 26 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
TI DEVELOPMENT OF LIPO **PROTEIN** LIPASE ACTIVITY AND ACCUMULATION OF TRI ACYL GLYCEROL IN DIFFERENTIATING 3T3-L-1 **ADIPOCYTES** EFFECTS OF PROSTAGLANDIN F-2-ALPHA 1 METHYL-3-ISOBUTYL XANTHINE PROLACTIN AND INSULIN.

```
=> d bib ab 7 12 13 19
L12 HAS NO ANSWERS
L1        11103 SEA FILE=CAPLUS ABB=ON  PLU=ON  ADIPOCYTE
L2         3850 SEA FILE=CAPLUS ABB=ON  PLU=ON  FAT CELL
L3        13281 SEA FILE=CAPLUS ABB=ON  PLU=ON  L1 OR L2
L4       505156 SEA FILE=CAPLUS ABB=ON  PLU=ON  CULTURE OR CULTURED
L5         1688 SEA FILE=CAPLUS ABB=ON  PLU=ON  L3 AND L4
L6      1771287 SEA FILE=CAPLUS ABB=ON  PLU=ON  PROTEIN OR PEPTIDE
L7      2045360 SEA FILE=CAPLUS ABB=ON  PLU=ON  SEPARAT? OR IDENTI?
L8          154 SEA FILE=CAPLUS ABB=ON  PLU=ON  L5 AND L6 AND L7
L9         1525 SEA FILE=CAPLUS ABB=ON  PLU=ON  PREADIPOCYTE
L10          33 SEA FILE=CAPLUS ABB=ON  PLU=ON  L9 AND L8
L11          26 SEA FILE=BIOSIS ABB=ON  PLU=ON  L9 AND L8
L12           0 SEA FILE=BIOSIS ABB=ON  PLU=ON  L11 NOT L10

=> d bib ab l11 7 12 13 19

L11 ANSWER 7 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN  2000:372285 BIOSIS
DN  PREV200000372285
TI  A branched DNA signal amplification assay to quantitate messenger RNA of
    human uncoupling proteins 1, 2, and 3.
```

AU Zhou, Lubing (1); Cryan, Ellen V.; Minor, Lisa K.; Gunnet, Joseph W.; Demarest, Keith T.
CS (1) Endocrine Therapeutics, Drug Discovery, R.W. Johnson Pharmaceutical Research Institute, 1000 Route 202, Raritan, NJ, 08869 USA
SO Analytical Biochemistry, (June 15, 2000) Vol. 282, No. 1, pp. 46-53. print.
ISSN: 0003-2697.
DT Article
LA English
SL English
AB Uncoupling **proteins** (UCP) are inner mitochondrial membrane transporters which dissipate the proton gradient, releasing stored energy as heat. Three subtypes of UCP have been **identified** so far. The regulation of UCP expression is mainly controlled at the transcriptional level, thus making the measurement of UCP mRNA beneficial for both diagnosis and research of weight disorders and diabetes. We have developed an assay using the branched DNA signal amplification assay (bDNA assay) to quantitatively measure the mRNA levels for human UCP1, 2, and 3. UCP-subtype-specific primers were designed for the assay. RNA transcripts of each UCP generated by in vitro transcription were used to validate the specificity and sensitivity of the assay. The quantitative measurement of UCP mRNA was further demonstrated with **cultured** cells and human tissue. A comprehensive survey of UCP expression from 17 human tissues measured by the newly developed assay is provided. The method described here offers a rapid, sensitive, specific, and quantitative assay for measurement of human UCP mRNA.

L11 ANSWER 12 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:74774 BIOSIS
DN PREV199900074774
TI Angiotensin II receptors in human **preadipocytes**: Role in cell cycle regulation.
AU Crandall, David L. (1); Armellino, Douglas C.; Busler, Dennis E.; McHendry-Rinde, Barbara; Kral, John G.
CS (1) Wyeth-Ayerst Res., CN 8000, Princeton, NJ 08543 USA
SO Endocrinology, (Jan., 1999) Vol. 140, No. 1, pp. 154-158.
ISSN: 0013-7227.
DT Article
LA English
AB The role of angiotensin II (AII) in human **preadipocyte** physiology has been investigated in primary **cultures** from human adipose tissue. Receptor binding studies indicated that human **preadipocytes** express a high affinity AII binding site of the AT1 subtype, as binding of 125I-labeled (Sar1,Ile8)AII was rapid, saturable, and specific. As AII has previously been demonstrated to affect the cell cycle in adrenal and cardiac cells, the effect of AII on regulation of cycle progression was examined in human **preadipocytes**. Stimulation of **preadipocytes** with AII resulted in G1 phase progression of the cell cycle, as determined by flow cytometric analysis. AII treatment was associated with induction of expression of the messenger RNA for the cell cycle regulatory **protein** cyclin D1 in a dose-dependent manner. Pretreatment of cells with subtype-selective AT receptor ligands before AII stimulation indicated that the cyclin response was mediated via the AT1 receptor. The **identity** of the cells as **preadipocyte** was verified by **culture** in a defined differentiation medium, observing both leptin message expression and

triglyceride accumulation by flow cytometry. These findings indicate that AII has early, receptor-mediated effects on cell cycle progression in human **preadipocytes** that may contribute to differentiation to the **adipocyte** phenotype.

L11 ANSWER 13 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1998:475614 BIOSIS
DN PREV199800475614
TI Adipose tissue extracellular matrix: Newly organized by **adipocytes** during differentiation.
AU Nakajima, Ikuyo (1); Yamaguchi, Takahiro; Ozutsumi, Kyouhei; Aso, Hisashi
CS (1) Cell. Biol. Lab., Dep. Anim. Physiol., Natl. Inst. Anim. Industry, Nordindanchi, Tsukuba, Ibaraki 305 Japan
SO Differentiation, (Aug., 1998) Vol. 63, No. 4, pp. 193-200. ISSN: 0301-4681.
DT Article
LA English
AB The distribution of eight types of extracellular matrix (ECM) **proteins** (type I-VI) collagen, laminin and fibronectin) in the skeletal muscle of Japanese Black cattle was determined by indirect immunofluorescence using specific antibodies against each **protein** . ECM **proteins** were well organized in the intramuscular connective tissue: type I, II, III collagen and fibronectin were localized primarily in the perimysium, type V and VI collagen in both the perimysium and endomysium, and type IV collagen and laminin were virtually confined to the endomysium. In the loose connective tissue holding the **adipocytes** together to form a tissue mass between the muscular bundles, seven of the ECM **proteins** not type II collagen were relatively abundant in a disordered arrangement. Further analysis by in vitro immunocytochemical staining also demonstrated that a stromal-vascular **preadipocyte** cell line (BIP cell), derived from Japanese Black cattle, synthesized various ECMs in much the same way as fibroblasts. Exponentially growing BIP cells with a fibroblastic phenotype were found to produce type II, V, and VI collagens, in addition to the other previously **identified** connective tissue glycoproteins of mouse 3T3 **preadipocytes**. When confluent **preadipocyte cultures** were stimulated with adipogenic medium, a fibrillar network of ECM was observed to bridge the intercellular space and connect adjacent cell surfaces. During **adipocyte** differentiation, type III collagen and laminin were arranged in a non-fibrous structure, and type II collagen was only barely detected. These results are supported by the staining of the adipose tissue, where all ECM **proteins** studied except type II collagen were stained intensely. These data indicate that in vivo under conditions permissive for adipose conversion, the production and organization of ECM, accompanied by hyperplasia and hypertrophy of precursor cells, gives rise to adipose tissue in skeletal muscle with its own ECM products. These data further suggest that each ECM **protein** might have some role for the **adipocytes** in forming tissue.

L11 ANSWER 19 OF 26 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:501281 BIOSIS
DN BA94:119806
TI TRANSIENTLY AND STABLY INTRODUCED CCAAT-ENHANCER-BINDING-**PROTEIN** GENES ARE CONSTITUTIVELY EXPRESSED IN **CULTURED** CELLS.
AU XANTHOPOULOS K G; CANNON P D; ROBINSON G S; MIRKOVITCH J; DARNELL J E JR
CS KAROLINSKA INSTITUTE, CENTER BIOTECHNOLOGY, NOVUM, S-141 57 HUDDINGE,

SWED.
SO EUR J BIOCHEM, (1992) 208 (2), 501-509.
CODEN: EJBCAI. ISSN: 0014-2956.
FS BA; OLD
LA English
AB CCAAT/enhancer-binding **protein** (C/EBP) is expressed in certain cell types including hepatocytes and **adipocytes**. In order to understand the mechanisms that control the expression of the mouse C/EBP gene in the liver as well as in **adipocytes**, we have studied both the endogenous gene and transfected C/EBP gene constructs. The initiation site of transcription was **identified** and a strong liver-specific DNase-I hypersensitive site located at -3 kb, which does not appear to contribute functionally to the regulation of the gene in a variety of either transiently or stably transfected cells with constructs which include sequence up to 6-kb upstream of the transcription start. C/EBP gene expression during the transition from **preadipocytes** to **adipocytes** was shown to be controlled at the level of transcription. However, **adipocytes** stably transfected with constructs that include -3.3 kb upstream of the C/EBP gene do not express the reporter genes in a differentiation-specific manner. We detected several DNA-binding **proteins** that interact with the upstream sites of the C/EBP gene. Those include two labile and two heat-stable site-specific DNA-binding **proteins** that are present in nuclear extracts from several tissues and **cultured** cell lines.

=> log hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.85	59.30
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-4.96

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 13:51:24 ON 12 FEB 2002